

S.N. 10/648,352

1021.43087X00
Page 2**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A magnetic recording apparatus comprising:

a magnetic recording medium;

a magnetic head including a recording magnetic pole and an excitation coil for producing a magnetic field for exciting the recording magnetic pole so as to record information on the magnetic recording medium;

a terminal for receiving a recording command and recording data from a host device; and

a temperature measuring means and a head amplifier, wherein

the head amplifier, upon reception of the recording data, causes an electric current to flow in the excitation coil prior to the start of recording of the data using the magnetic head, and

the intensity of the recording current sent from the head amplifier to the excitation coil is varied depending on the temperature measured by the temperature measuring means.

2. (currently amended) A magnetic recording apparatus comprising:

a magnetic recording medium;

S.N. 10/648,352

1021.43087X00

Page 3

a magnetic head including a recording magnetic pole and an excitation coil for producing a magnetic field for exciting the recording magnetic pole so as to record information on the magnetic recording medium;

a temperature measuring means and a head amplifier having a write gate;

a terminal for receiving a signal from a host device;

a hard disc controller connected to the terminal; and

an actuator, wherein

the actuator, upon reception of a recording command from the host device via the terminal, moves the magnetic head to a track on the recording medium that is designated by the hard disc controller, and

the head amplifier opens the write gate after the settling of the magnetic head and prior to the recording of the recording data in a sector by the magnetic head, and

the intensity of the recording current sent from the head amplifier to the excitation coil is varied depending on the temperature measured by the temperature measuring means

3. (currently amended) A magnetic recording apparatus comprising:

a magnetic recording medium;

a magnetic head including a recording magnetic pole and an excitation coil for producing a magnetic field for exciting the recording magnetic pole so as to record information on the magnetic recording medium;

a terminal for receiving a signal from a host device;

a hard disc controller connected to the terminal; and

a temperature measuring means and a head amplifier; and

an actuator, wherein

S.N. 10/648,352

1021.43087X00

Page 4

the actuator, upon reception of a recording command from the host device via the terminal, moves the magnetic head to a track on the recording medium that is designated by the hard disc controller, and

a recording current is caused to flow in the excitation coil after the settling of the magnetic head and before the magnetic head arrives at a sector where the recording data is to be recorded, and

the intensity of the recording current sent from the head amplifier to the excitation coil is varied depending on the temperature measured by the temperature measuring means.

4. (Currently Amended) The magnetic recording apparatus according to claim 1, ~~further comprising a temperature measuring means, wherein the head amplifier, if~~ the temperature measured by the temperature measuring means is below a predetermined value, causes a current to flow in the excitation coil in the magnetic head after the reception of the recording data and prior to the start of recording of the data by the magnetic head.

5. (original) The magnetic recording apparatus according to claim 4, wherein if the temperature measured by the temperature measuring means is below a predetermined value, the head amplifier causes a current to flow in the excitation coil before the magnetic head arrives at a sector where the recording data is to be recorded.

6. (original) The magnetic recording apparatus according to claim 4, wherein the intensity of the recording current supplied from the head amplifier to the excitation

S.N. 10/648,352

1021.43087X00

Page 5

coil is varied depending on the temperature measured by the temperature measuring means.

7. (original) The magnetic recording apparatus according to claim 1, further comprising a timer, wherein, if no writing into the magnetic recording medium takes place for a predetermined period of time, the head amplifier, upon reception of the recording data, causes a current to flow in the excitation coil in the magnetic head prior to the start of recording of the data by the magnetic head.

8. (currently amended) A magnetic recording apparatus comprising:

a magnetic recording medium;

a magnetic head including a recording magnetic pole and an excitation coil for producing a magnetic field for exciting the recording magnetic pole so as to record information on the magnetic recording medium;

a temperature measuring means and a head amplifier; and

a terminal for receiving a signal from a host device, wherein

the head amplifier, upon reception of a recording command from the host device via the terminal, produces a recording current comprising dummy data to which recording data sent from the host device is added and transmits the recording current to the magnetic head, and

the intensity of the recording current sent from the head amplifier to the excitation coil is varied depending on the temperature measured by the temperature measuring means

S.N. 10/648,352

1021.43087X00

Page 6

9. (currently amended) A magnetic recording apparatus comprising:

a magnetic recording medium;

means for recording information on the magnetic recording medium including a magnetic head having a recording magnetic pole and an excitation coil for producing a magnetic field for exciting the recording magnetic pole so as to record information on the magnetic recording medium;

means for transmitting a recording current to the recording means;

means for receiving a signal from a host device; and

means for receiving a signal from the terminal and for controlling the recording-current transmission means, wherein means; and

a temperature measuring means and a head amplifier, wherein

the transmission means, after the signal reception means receives a recording command from the host device, produces a recording current corresponding to recording data received by the signal reception means from the host device and to dummy data, and transmits the current to the recording means, and

the intensity of the recording current sent from the head amplifier to the excitation coil is varied depending on the temperature measured by the temperature measuring means.

10. (original) The magnetic recording apparatus according to claim 8, further comprising a dummy track for recording only the dummy data.

11. (Currently Amended) The magnetic recording apparatus according to claim 8, ~~further comprising a temperature measuring means, wherein, if the temperature~~

S.N. 10/648,352

1021.43087X00

Page 7

measured by the temperature measuring means is below a predetermined value, the head amplifier produces a recording current comprising recording data to which dummy data is added.

Claim 12. (Canceled without prejudice or disclaimer).

13. (original) The magnetic recording apparatus according to claim 8, further comprising a timer means, wherein

if no writing into the magnetic recording medium takes place for a predetermined period of time, the head amplifier produces a recording current comprising recording data to which dummy data is added, if the temperature measured by the temperature measuring means is below a predetermined value.

14. (original) The magnetic recording apparatus according to claim 8, further comprising a memory for storing the data that has been recorded in the data sector where the dummy data is recorded.

15. (original) The magnetic recording apparatus according to claim 14, where the memory is a nonvolatile memory.

16. (original) The magnetic recording apparatus according to claim 8, further comprising a hard disc controller, wherein

the hard disc controller, prior to transmitting the recording current to the excitation coil, causes the magnetic head to read the data recorded in the sector where the dummy data is to be recorded, stores the thus read data in the memory,

S.N. 10/648,352

1021.43087X00

Page 8

and, after the information comprising the recording data to which the dummy data has been added is recorded in the recording medium, records the information stored in the memory in the same sector as prior to reading.